

*Artemia salina* from *A. Mühlhauseni*, namely the different form of the lower antennæ, which in the former species presents an inflation wanting in the second; secondly, M. Schmankeiwitsch seems to assume that *Artemia* is distinguished from *Branchipus* only by the number of abdominal segments, and he does not mention the very marked differences presented by the inferior antennæ in the two genera. Lastly, it is rather difficult to understand whether the modifications which cause *Artemia salina* to pass into *A. Mühlhauseni* make their appearance sooner or later than, or at the same with, the modifications which approximate the genus *Artemia* to the genus *Branchipus*.—*Zeitschr. für wiss. Zool.* xxv. Suppl. i. 1875, p. 103, pl. 6; *Bibl. Univ. Arch. des Sci.* liv. Nov. 15, 1875, p. 284.

*The Drosera as an Insect-catcher.* By THOMAS MEEHAN.

Mr. Thomas Meehan referred to a discussion before the Academy recently in which the question occurred, whether those plants which had contrivances for catching insects made any nutritive use of the insects so caught. It had been argued from experiments made in England with plants under bell-glasses and free from insects which were quite as healthy as those which had had insects regularly supplied to them, that the plants were not actually insect-eaters.

In a recent botanical trip to New Jersey he had found in Atlantic County, about five miles from Hammonton, three species of *Drosera* (*D. filiformis*, *D. longifolia*, and *D. rotundifolia*), all growing near each other in immense quantity. All of these species had insects of numerous kinds attached to them. Large numbers of plants had no insects. The species with the largest number of plants having insects on them were in the order as above named. The insects are held by the pin-like glandular hairs, which seem to lean in from all sides towards the insect (as if, from its struggles to escape, drawn in) and thus securely hold it. The remains of the insects which have been caught seem to continue attached to the plant for a long time; and thus can be seen which plant has had the benefit of insect-food, if food it be. No difference, however, in health or vigour could be traced between those which had had insects and those which had had none. Mr. Meehan did not, however, think that these observations, or experiments founded on any thing they suggested, would settle the question of nutrition. Among ourselves there were discussions as to whether people were healthier as vegetarians or flesh-eaters, while figures showed little difference, if any, either way. A plant might feed on insects when it could get them, and yet be no healthier than those which had to get along as other plants did. It was necessary, however, to the theory advanced by those who believed the insect-catching were really insect-eating plants, to show that some superior advantages favoured the insect-catchers. It was believed that the power to catch insects was a developed one, a power not possessed by their predecessors, and developed according to the law of natural selection. Unless insect-catching can be shown to be an especial advantage, there was nothing to select. At any rate, his observations on the *Drosera* only showed

that all the plants, whether with insects or with none, were equally healthy.

Some observers have recorded that there is a motion of the leaves as well as of the glandular hairs in the effort to catch insects. Only one fact was noticed bearing on this question: one leaf of a *Drosera filiformis* had coiled over towards its upper surface from the apex, and held an insect in its folds.—*Proc. Acad. Nat. Sci. Philadelphia*, July 20, 1875.

*On the Classification and Synonymy of the Stellerida.*

By M. E. PERRIER.

In presenting to the Academy the first part of my "Révision de la Collection des Stellérides du Muséum d'Histoire Naturelle de Paris," I request permission to submit the principal results contained in the portion of this work which is still to be published, and which will include the investigation of five of the eight families into which I divide the Stellerida known at the present day. These families are the Goniasteridæ, Asterinidæ, Pterasteridæ, Astropectinidæ, and Brisingidæ. As in the case of the first three families, the Asteriadæ, Echinasteridæ, and Linckiadæ, it is especially from the various arrangement of the skeletal pieces that the primordial characters have been derived. With me the family Goniasteridæ corresponds to the genera *Astrogonium*, *Goniodiscus*, *Stellaster*, *Asteropsis*, *Oreaster*, and *Culcita*, as defined by Müller and Troschel; but I have not been able to adopt the limitation of these genera marked out by those authors. Their genera *Goniodiscus* and *Asteropsis* especially are eminently artificial. The genera created by Gray are, in some respects, better, but too numerous; the truth seems to me to lie between the two. For the new limitation of the genera, I have appealed sometimes to the form of the skeletal pieces, sometimes to the arrangement of the pedicellariæ, which had previously furnished such clear characters in the family Asteriadæ. I cannot, however, accept the great genus *Goniaster* which Von Martens has endeavoured to reestablish. From an examination of Gray's types in the British Museum, his genera *Randasia* and *Hosea*, which belong to this family, must fall; the former contains only young *Culcitæ*, the latter young *Anthenææ*.

The genera composing my family Asterinidæ are *Patiria*, Gray (restricted), *Nepanthia*, Gray (pars), *Asterina*, Nardo, *Palmipes*, Linck, *Disasterina* (nov. gen.), and *Ganeria*, Gray. This last genus, which is but little known, is a most curious intermediate type between the Asterinidæ and the Astropectinidæ. The *Nepanthiæ* have been wrongly regarded as *Chætasteres*. I have ascertained that Gray united in this genus two very distinct types—one identical with *Chætaster* in the family Astropectinidæ, and another which, by its imbricated skeletal pieces, belongs to the family Asterinidæ. This latter is our *Nepanthia*.

The family Astropectinidæ includes the genera *Chætaster*, *Luidia*, *Astropecten*, *Archaster*, and *Ctenodiscus*. Each of the other two families contains only a single genus.

Beyond these modifications introduced into the systematic arrange-